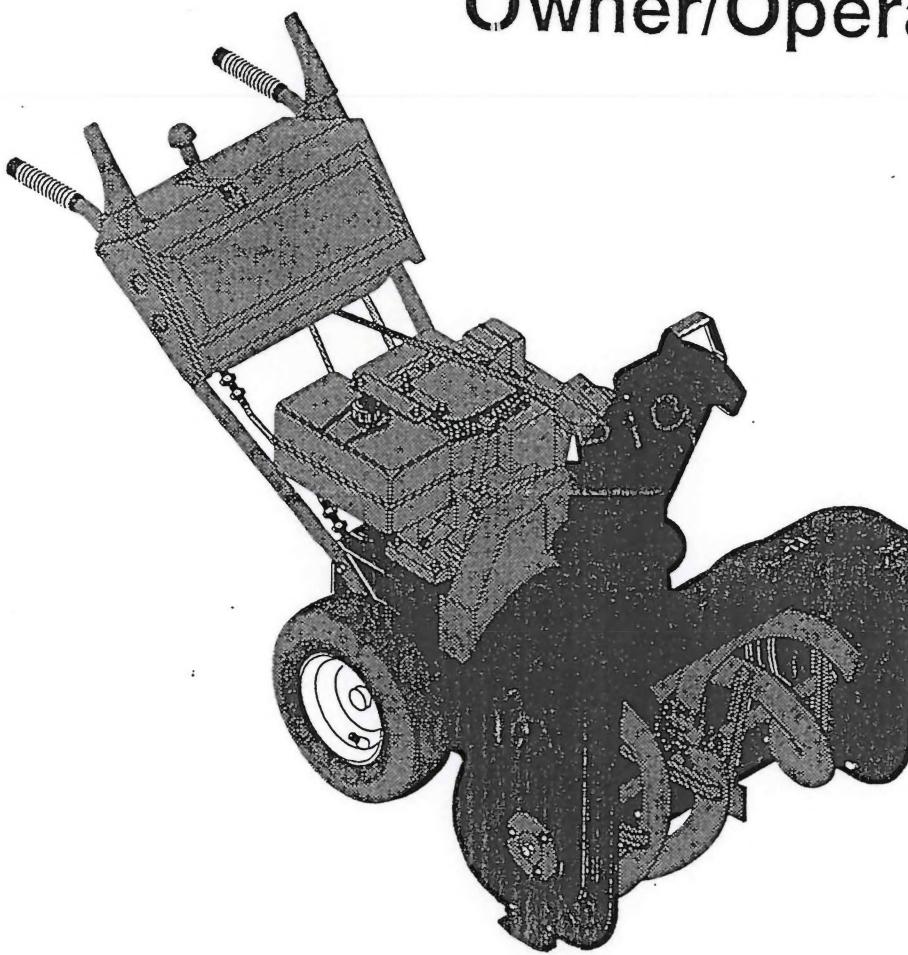


228-6528
FOR
REPAIRS

Ariens®

Sno-Thro

Owner/Operator Manual



932
SERIES

M O D E L S

- 026 - ST524
- 027 - ST724
- 029 - ST824
- 302 - ST524
- 303 - ST724

A Message to Ariens Customers . . .

Welcome to the world of Ariens equipment. We are pleased that you have purchased the best Sno-Thro available. The care you give your Ariens Sno-Thro will determine the satisfaction and service life you will obtain from it. Use this manual as your guide. By observing the instructions and suggestions in this manual, your Ariens Sno-Thro will serve you well for many years.

Your Ariens dealer will be happy to supply any service or advice which may be required to keep your Ariens Sno-Thro operating at peak efficiency. He stocks genuine Ariens parts and lubricants; manufactured with the same precision and skill as the original equipment. His factory trained staff is kept well informed on the best methods of servicing Ariens

equipment and is ready and able to serve you. If service is required, be prepared to supply the service person with the Model and Serial Number of the Sno-Thro, as well as a full description of the problem encountered.

NOTE: The descriptions and specifications contained in this manual were in effect at the time the manual was approved for printing. Ariens Company reserves the right to discontinue models without notice and without incurring obligation. The Sno-Thro described within this manual may not be identified as either standard or optional and the various illustrations may not be applicable to your particular unit. If you have questions, always check with your Ariens dealer.

Safety Alert Symbol And Notations

The following safety notations are used throughout this manual to call attention to special information or operating procedures. Understand the message in each notation and be alert to unsafe conditions and the possibility of personal injury.

NOTE: A NOTE points out general reference information regarding proper operation and maintenance practices.

IMPORTANT: An IMPORTANT statement indicates specific procedures or information that is required to prevent damage to the machine or its attachments.



This safety alert symbol is used to attract your attention PERSONAL SAFETY IS INVOLVED! When you see this symbol - BECOME ALERT - HEED ITS MESSAGE.



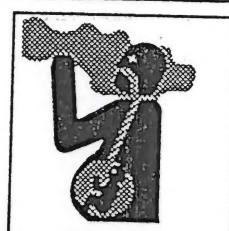
DANGER: Indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury.



WARNING: Indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.



CAUTION: Indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury. It is also used to alert against unsafe practices.



WARNING

The engine exhaust from this product contains chemicals known to the State of California to cause cancer, birth defects or other reproductive harm.

Contents

Accessories	21
Adjustments	18
Attachments	21
Controls and Features.....	9
Dealer Preparation for Operation	6
Lubrication and Maintenance	14
Operation	10
Repair Manual	20
Safety Alert and Notations.....	i
Safety Decals	4
Safety Precautions	1
Specifications	21
Storage.....	20
Warranty.....	22

Specific Model and Serial Numbers are on a label located on the frame of your Sno Thro and on a label located on the product registration form. Record those numbers below and transfer the label from the product registration to place indicated below. Use these numbers whenever parts or service is required.

Model Number _____



Serial Number _____

Models

Model 932026 (ST524)
5 HP w/24" Attachment
Serial No. 012400 and up

Model 932027 (ST724)
7 HP w/24" Attachment
Serial No. 031750 and up

Model 932029 (ST824)
8 HP w/24" Attachment
Serial No. 005150 and up

Model 932302 (ST524)
Sno Thro
Serial No. 000600 and up

Model 932303 (ST724)
Sno Thro
Serial No. 000180 and up

NOTE: All References to "Left", "Right", "Front" and "Rear" are given from operator's position.

Training

Read and understand this Owner's Manual and engine instructions before operating Sno-Thro. Be thoroughly familiar with controls and proper use of equipment. Know how to stop Sno-Thro and disengage control quickly in an emergency.

Use only attachments and accessories designed for your Sno-Thro. See your Ariens Dealer for a complete list of attachments or accessories.

Understand and follow each Danger, Warning, Caution and Instruction decal installed on equipment.

NEVER allow children to operate Sno-Thro. DO NOT allow adults to operate Sno-Thro without proper

instructions.

Keep the area of operation clear of all persons, particularly children and pets.

Safe operation of this equipment requires your complete and unimpaired attention at all times. DO NOT operate Sno-Thro after or during the consumption of medication, drugs or alcohol.

Preparation

Before first snowfall of the season clearly mark location of all obstacles (such as driveway markers, water or gas shut-offs and etc.) so that they can be avoided when throwing snow.

Safety Precautions (Continued)

Thoroughly inspect and clear work area of objects which might be picked up and thrown. Remove all doormats, sleds, boards, wires, bones and other foreign objects.

Wear adequate winter outer garments, gloves and rubber footwear which will improve footing on slippery surfaces.

Wear eye protection such as safety goggles to protect eyes from objects that may be thrown from machine.

DO NOT wear loose clothing or scarves that may get caught in rotating parts.

Gasoline is highly flammable and its vapors are explosive. Handle with care. Use an approved (RED) fuel container.

NEVER allow smoking materials, sparks or flame (match, pilot light, etc.) near equipment or fuel container.

Check fuel supply before starting engine. Fill fuel tank outdoors with extreme care. **DO NOT** fill fuel tank indoors, when engine is running or while engine is still hot from operation. Replace fuel cap securely and wipe spilled fuel before starting engine.

Adjust auger/impeller housing height to clear gravel or crushed rock surfaces.

NEVER attempt to make any adjustments to unit while engine is running (except where specifically recommended by manufacturer).

Operation

DO NOT put hands or feet near rotating parts. Keep clear of discharge opening at all times.

Check function of all controls before starting engine. All safety devices and guards must be in position and operating properly or personal injury may result.

Open doors if engine is run in garage, exhaust fumes are dangerous. **DO NOT** run engine in an enclosed area.

Operate equipment only when there is good visibility and light. Always be sure of your footing (walk never run). Exercise caution to avoid slipping or falling.

Disengage power to auger/impeller when unit is being transported or is not in use.

DO NOT overload machine capacity by attempting to clear snow at too fast a rate.

NEVER direct discharge of material toward bystanders nor allow anyone in front of equipment while unit is in operation. Be familiar with area of operation.

Stay alert for holes, rocks, roots and hidden hazards in area of operation.

Exercise extreme caution when operating on or crossing gravel drives, walks or roads. Stay alert for hazards and traffic. **DO NOT** operate unit near glass enclosures, automobiles, window wells, dropoffs, etc., without proper adjustment of discharge direction and angle.

DO NOT clear snow across face of slopes. Exercise extreme caution when changing direction on slopes. **DO NOT** attempt to clear steep slopes.

Stop engine, remove key, wait for moving parts to stop, and remove wire from spark plug (keep wire away from spark plug to prevent accidental starting) before leaving operator's position for any reason such as unclogging auger/impeller housing, discharge chute, when making any repairs, adjustment, inspections or cleaning unit.

DO NOT touch equipment parts which might be hot from operation. Before attempting to maintain, adjust or service allow such parts to cool.

If equipment vibrates abnormally, disengage attachment, stop engine at once, and remove key. Abnormal vibration is a warning of trouble. Repair any damage before restarting unit.

After striking a foreign object, stop engine, remove switch key and wait for moving parts to stop before leaving operator's position. Thoroughly inspect unit for any damage and repair damage before restarting and operating unit.

Run unit a few minutes after throwing snow to prevent freeze up of auger/impeller in housing.

Take all possible precautions when leaving unit unattended, such as disengaging power to attachment, stopping engine and removing key to prevent unauthorized use.

Safety Precautions (Continued)

Maintenance and Storage

DO NOT change engine governor setting or over speed engine.

NEVER tamper with safety devices. Check their proper operation regularly. See page 7 for safety system check.

Keep all nuts, bolts and screws tight and be sure equipment is in safe working condition. Check shear bolts and all hardware at regular intervals.

Refer to Storage Section of this Sno-Thro Owner's Manual for important instructions if unit is to be stored for extended periods.

NEVER store equipment with fuel in tank inside a building where fumes may reach an open flame or spark. Allow engine to cool before storing in any enclosure.

Maintain or replace safety and instruction decals as necessary.

Operation



WARNING: Wear adequate winter outer garments and footwear which will improve footing on slippery surfaces. Wear eye protection such as safety goggles to protect eyes from objects that may be thrown from machine. DO NOT wear loose clothing or scarves that may get caught in rotating parts of unit.



CAUTION: Make sure all hardware is tight, all safety devices in place and all adjustments correct.

IMPORTANT: Check impeller to be sure it is not frozen; by removing spark plug wire, engaging attachment clutch and pulling rewind starter. If impeller is frozen, move Sno-Thro to a heated area and thaw to prevent possible damage to unit.

NOTE: This product is equipped with an internal combustion type engine. DO NOT use unit on or near any unimproved, forest-covered or brush-covered land unless exhaust system is equipped with a spark arrester meeting applicable local, state or federal laws. A spark arrester, if it is used, must be maintained in effective working order by operator.

Check that engine crankcase is full of oil using dipstick, see Lubrication and Maintenance Section to add or change.

Fuel



WARNING: Gasoline is highly flammable and must be handled with care. Never fill tank when engine is running or hot from operation. DO NOT allow open flame, matches or smoking in area. DO NOT overfill. Wipe up any spills. Use approved (RED) gasoline container.

NOTE: To prevent foreign particles from entering tank while filling; wipe snow, dust, dirt and debris from around cap before removing.

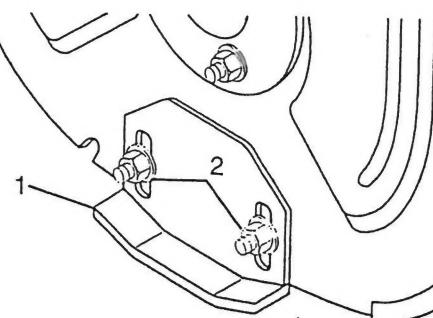
Check fuel supply. Fill gasoline tank with good grade of fresh unleaded gasoline (leaded if unleaded is unavailable). DO NOT use premium, gasohol or mix gasoline with oil.

Runners



CAUTION: Adjust auger/impeller housing height to clear gravel or crushed rock surfaces.

Runners should be adjusted as conditions require. Raising or lowering runners controls distance scraper blade is held above surface being cleared.



1. Runner(s)
2. Runner Hardware

Figure 6: Runners

When operating machine on gravel surface, lower runners so that housing will not pick up gravel. On concrete, blacktopped or packed down snow surfaces, raise runners so that scraper blade scrapes clean. To reduce tendency of housing to ride up over heavy wet or hard packed snow, remove runners and reinstall with their narrow edge down.

Position Sno-Thro on a flat level surface. Be sure tire pressure is correct and equal. Adjust runners by inserting a spacer of desired thickness under center of scraper blade, loosen hardware, slide runners to flat surface and tighten hardware.

NOTE: Above method keeps housing level by adjusting runners equally. Uneven runners make machine difficult to steer and results in uneven clearing.

Operation (Continued)

Chute Deflector

Position Deflector at desired height. DO NOT throw snow any higher than necessary.

NOTE: Tighten locking hardware on chute deflector if it does not stay in set position.

Discharge Chute



DANGER: DO NOT put hands or feet near or under rotating parts. Keep clear of discharge opening at all times.



WARNING: NEVER direct discharge of material toward bystanders nor allow anyone in front of equipment while unit is in operation. Be familiar with area of operation.

IMPORTANT: DO NOT operate Sno-Thro near glass enclosures, automobiles, window wells, drop off, etc., without proper adjustment of discharge direction and angle.

Direct snow away from area to be cleared and with direction of wind whenever possible. Crank rotates chute 220 degrees.

If discharge chute does not stay in position while operating, tighten nut on carriage bolt at pivot point to increase tension on spring.

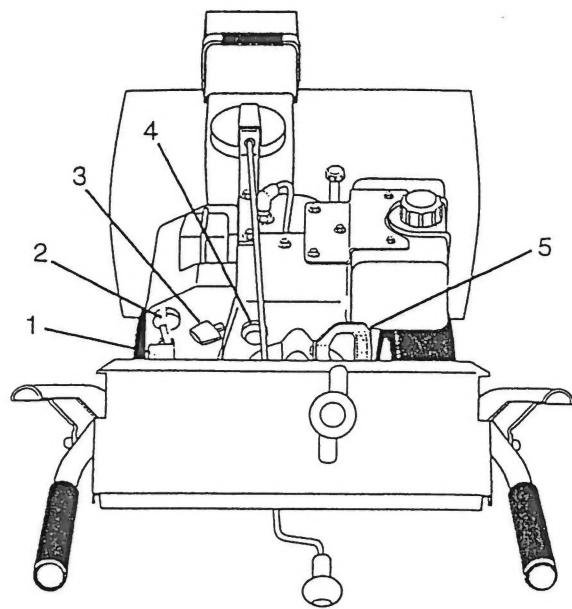
Snow is best removed as soon as possible after a snow fall.

Starting



CAUTION: DO NOT attempt to start your engine at this time. Thoroughly read this entire Owner's Manual and engine manufacturers operating instructions first.

NOTE: Try out each control without running engine to see how they work and what they do.



1. Key Switch
2. Choke
3. Throttle
4. Primer Bulb
5. Rewind Starter

Figure 7: Engine Controls

Engine Ignition



WARNING: If equipment vibrates abnormally, disengage attachment, stop engine at once and remove key. Abnormal vibration is a warning of trouble. Repair any damage before restarting unit.



CAUTION: Turn Key "OFF" and remove it before attempting any maintenance, adjustment or leaving unit unattended.

Place key in switch and turn it clockwise to "RUN" position.

Throttle



Throttle controls engine speed. To increase engine speed pull up, to decrease push down throttle. Set throttle at part throttle position for cold weather starts and at fast position for normal operation or warm starts.

Operation (Continued)

Choke



Move choke control to "Choke" position. When engine has started, open choke gradually.

NOTE: A warm engine requires less choking than a cold engine. If fuel drips out of carburetor while trying to start engine, engine is over choked. Pull starter several times with choke open.

Primer Bulb



Push primer bulb two or three times when engine is cold. When temperatures are below -15 degrees Fahrenheit, additional priming may be needed.

Rewind Starter



WARNING: To prevent discharge toward operator's starting position, always turn discharge chute straight ahead for starting unit.

Stand to right of unit. Grasp starter handle and pull rope out slowly until it pulls harder, this is compression stroke, let rope rewind slowly. Then pull rope with a rapid continuous full arm stroke. Let rope rewind slowly.

IMPORTANT: DO NOT let starter handle snap against starter.

Repeat above instructions until engine starts. (Refer to engine manufacturers instructions).

After engine has started and choke has been opened, set throttle at its fast position.

NOTE: If Sno-Thro is equipped with electric starter, refer to instructions provided with starter accessory.

Speed Selector



CAUTION: DO NOT overload machine capacity by attempting to clear snow at too fast a rate.



CAUTION: Operate equipment only with good visibility and light.

Speed Selector controls direction and speed of motion. Moving speed selector forward from first forward speed increases forward travel speed. Moving it to rear from first rearward speed increases rear travel speed.

IMPORTANT: Position Speed Selector in notch of desired speed. Forward speed can be changed without clutching. DO NOT change motion from forward to reverse with clutch engaged.

NOTE: Low speed is recommended for removing deep or hard packed snow.

Wheel Drive Clutch



CAUTION: Stay alert for holes, rocks, roots and hidden hazards in area of operation. Exercise extreme caution when operating on or crossing gravel drives, walks or roads. Stay alert for hidden hazards or traffic.

A downward force on wheel drive clutch lever engages wheel drive for propelling unit. Releasing wheel drive clutch lever stops forward or reverse movement.



CAUTION: Disengage power to auger/impeller when unit is being transported or is not in use. DO NOT operate unit at high transport speeds on slippery surfaces. Use care when backing.

NOTE: When transporting unit to or from area to be cleared, press down on handlebars enough to raise front of sno-thro slightly off surface and engage wheel drive clutch without engaging attachment drive clutch.

Operation (Continued)

Attachment Drive Clutch



CAUTION: Stop engine and remove wire from spark plug after striking a foreign object. Thoroughly inspect sno-thro for any damage and repair damage before restarting and operating unit.

A downward force on attachment drive clutch lever engages attachment (auger/impeller) and releasing it disengages attachment.

NOTE: Attachment clutch should be engaged before wheel drive clutch when attempting to throw snow.

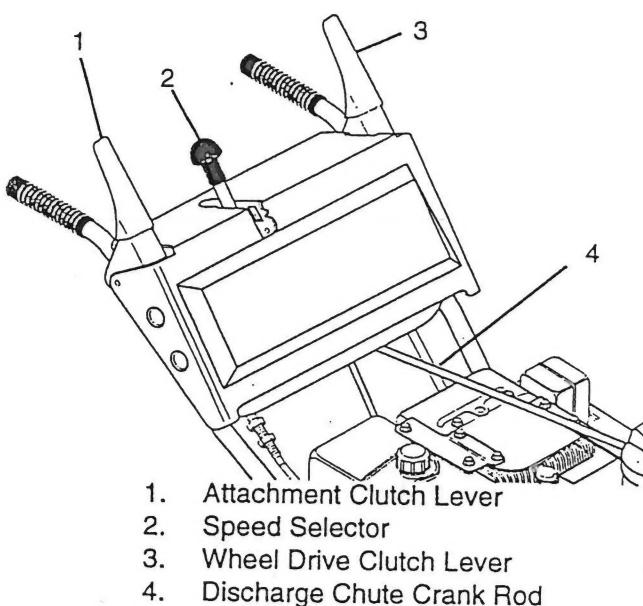


Figure 8: Operating Components

To clear an area, run sno-thro in an overlapping series of paths. For large areas start in middle and throw snow to each side so you do not have to move it more than once.

Stopping



WARNING: Take all possible precautions when leaving unit unattended, such as disengaging power to attachment, stopping engine and removing key to prevent unauthorized use.

IMPORTANT: Run attachment a few minutes after throwing snow to prevent freeze-up of auger/impeller.

Release attachment drive clutch, throttle down and turn engine ignition key to "OFF".